accurate on the whole: so faithful is it that Mr. Somerville has omitted to correct Hartig's own mistake as to the generic name of the teak, which reappears in the English edition as *Tectonia*—surely the translator knows it should be *Tectona!*

The chief defects in the original pamphlet may be summed up in that characters are relied on for distinguishing closely allied woods which do not serve the purpose. For instance, the broad medullary rays, so called, of the alder are a very treacherous guide; and the admission that the wood of *Æsculus* "occupies a position midway between" the hard and soft woods, itself shows how useless the property of hardness is, as a class character, unless defined in a rigid manner.

Both the selection and the description of the seven exotic timbers mentioned in the appendix are faulty, and we are driven to the conclusion that there is room for a much better book on the subject than the little pioneer under review. As a pioneer, however, it is to be welcomed, with its useful, compact information, as well as its failings.

Advanced Physiography (Physiographic Astronomy). By John Mills. (London: Chapman and Hall, 1890.)

The introductory part of this book is a reprint of the elementary lessons in the subject by the same author (Nature, vol. xlii. p. 76), and the remainder is intended to meet the requirements of advanced students in connection with the Science and Art examinations. The new material constitutes a fair general outline of the subject, but some of the descriptions suffer from want of detail. There are also indications of the author's unfamiliarity with some parts of the subject. On p. 248, for example, it is evident that the author is not well acquainted with stellar nomenclature, as he does not seem to be aware that Roman capitals are reserved for recently discovered variable stars. Again, on p. 253, he gives some figures relating to variable stars, which he evidently does not understand; he forgets to point out that Dunér's observations of stars were all of one spectroscopic group, and that the numbers given show that the maximum of variability occurs in that particular group. It should be an author's duty to use no term which he has not explained, but on page 114 he refers to the moon's mean horizontal parallax, although the meaning is not even hinted at.

The excellent plan of writing a head-line over each important paragraph has been adopted, but has not been employed consistently throughout. Thus, under the heading "To weigh a planet having a satellite," we find also a reference to the determination of the masses of the moon and the satellites of Jupiter and Saturn; and again, the chapter headed "Celestial Photography" consists largely of terrestrial magnetism.

The illustrations are numerous, but of varying quality; it is difficult to imagine what kind of telescope would give such a view of the moon as that represented in Fig. 93.

Travels in Africa. By Dr. Wilhelm Junker. Translated from the German by A. H. Keane, F.R.G.S. (London: Chapman and Hall, 1890.)

The work of which this is a translation records Dr. Junker's experiences as a geographical explorer from the year 1875 to 1878. Besides an excursion to the Siwa Oasis and Natron Valley, it includes "a careful survey of the Báraka watercourse, wanderings through Upper Nubia, an expedition to the Sobat River, and numerous journeys throughout Makaraka Land and surrounding regions." It is to his later work that Dr. Junker chiefly owes his fame as an explorer; but in the present volume he gives an account of many notable achievements, and, as the translator points out, his descriptions of Makaraka Land and neighbouring districts will supply cartographers with plentiful material for filling up their blank spaces in an extensive region. Dr. Junker is a good writer as well as a bold and scientific traveller, and no one who begins to read his narrative will find it hard to go on to the end. The translator has done his work carefully, and the interest of the story is much increased by a valuable map and many good illustrations.

Selected Subjects in connection with the Surgery of Infancy and Childhood. By Edmund Owen, M.B., F.R.C.S. (London: Baillière, Tindall, and Cox, 1890.)

In this volume Dr. Owen has published (by request) the Lettsomian Lectures delivered by him at the Medical Society of London in the present year. The position of Lettsomian Lecturer has been held by so many illustrious members of the profession that he seems to have undertaken with diffidence the task entrusted to him. The subjects with which he decided to deal have of late, as he says, been attracting considerable attention; and no one can doubt that they are of great practical importance. Dr. Owen discourses on them not only with learning, but with the directness, clearness, and force that spring from careful and long-continued observation.

LETTERS TO THE EDITOR.

[*The Editor does not hold himself responsible for opinions expressed by his correspondents. Neither can he undertake to return, or to correspond with the writers of, rejected manuscripts intended for this or any other part of* Nature. *No notice is taken of anonymous communications.*]

The Correspondence on Russian Transliteration.

As absence from England prevented our replying at the time to the last letters on the system of Russian transliteration proposed in Nature (vol. xli. p. 397), we thought it best to delay reply till any further communications from foreign correspondents had arrived. Since our last note (Nature, vol. xli. p. 535) four letters have been received:—

(1) Mr. Wilkins (Nature, May 22, p. 77) writes from Tashkend to point out that the system fails to distinguish between the few Russian words which differ only in their final semi-vowel. This is quite correct, but could only be avoided by the adoption of a separate symbol for each of these two characters and their retention at the ends of words. The addition to the trouble of printing that this would involve would be far more serious than the chance of error: *krob*, a roof, is hardly more likely to be confused with *krob*, blood, than, in a quite analogous case, is the German *band*, a volume, with *band*, a ribbon.

We do not accept Mr. Wilkins's criticism that *ui* does not "even remotely" represent the sound of ы. In the use of the letter in such a word as Полный we fully admit that this is so; but in other cases, as after a labial, it seems to us to represent the sound fairly well. Phonetically, Prībuilov (to take Mr. Wilkins's own case) is not so exact as Prĭbūᵊlɔff, as the word would probably be rendered by the elaborate refinements of the "Historical English Dictionary"; but even this is inadequate. We despair of any correct phonetic rendering of Russian words in English characters till a system is arranged on the lines of Dr. Murray's; and then the word would appear in some such guise as ꟼɹĭbūᵊlꝹf!fₒ. *Ui* seems to us on the average, and certainly in the case chosen by Mr. Wilkins, a better phonetic equivalent than *y*—a letter which is unfairly overworked in nearly all systems of transliterations, and which we have reserved exclusively for the double symbols *ya, ye, yu.*

(2) Mr. Wilkins, and our second critic, Baron Osten-Sacken (Nature, May 22, p. 77), agree in condemning the adoption of *zh* for ж. A strong case can no doubt be made out for the claim of *j* to represent that letter, and *zh* was accepted (largely on phonetic grounds) as one of those mutual concessions which Baron Osten-Sacken commends. *Zh* has been largely used—almost universally in America—and it represents the sound better than the English *j*. No doubt the French *j* of *jour* is as near to it as the *zh* sound in the word *az(h)ure.* As the system proposed was intended for English-speaking countries we thought it inadvisable to adopt a French sound for one letter. The system is not so ambitious as Baron Osten-Sacken suggests it

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should be. The methods of transliteration used in Germany and France differ so much from one another, and both from the English, that it seemed hardly possible, however desirable, to get one system adopted for the three languages.

In regard to Baron Osten-Sacken's other points, we regard *tch* and *stch* as inadvisable for ч and щ respectively, as, without the use of brackets, they would be mistaken for other sequences; and it was generally agreed that brackets should only be used as a very last resource. Finally, *æ* for the rare and practically extinct **Ѵ** is as good a phonetic equivalent as anything else, and more convenient than the already overburdened *y*.

(3) We cordially agree with the main point in Mr. Chisholm's argument (NATURE, May 1, p. 6), viz. that different systems are required for different purposes. The phonetic method adopted by the Geographical Society is unquestionably the best suited for their maps, but is quite inadequate for bibliographic use. We are glad to see that the system proposed for the latter purpose has Mr. Chisholm's approval.

(4) Mr. Groves (NATURE, May 1, p. 6) quotes a case that strikes him as very cumbrous; but we fail to see that the alteration to SKRJIPSKY is a sufficient improvement to be worth the inconveniences that the changes would involve in other cases. Under no system could a page of transliterated Russian hope to read like Addisonian English.

We do not see that, in the cases we quoted in our reply to Mr. Groves's former letter, we really misunderstood him. We do not know whence or how the three Gazetteers derived their renderings of Nizhniĭ; we only quoted them to show how many different spellings were current, and that the word, as transliterated by the new system, is neither unintelligible nor materially different from forms already in use. In the cases to which we attached most weight, viz. the titles of journals quoted from Scudder, Bolton, and the *Geological Record* the transliterations were certainly derived direct from the Russian, and we thought it probable that the Chemical Society's Journal would also have quoted the papers from the original rather than from second-hand German sources.

In conclusion, it is advisable again to repeat that the system was proposed solely for bibliographic use in the English language: the bibliographers who laid down the requirements of the system insisted that it should be based on two principles and should satisfy four rules. Had these been published in the original note, some subsequent criticisms would probably not have been made. Considering that the criticisms that really apply to this non-phonetic, unæsthetic system do not require any changes to be made in it, we hope that it will be adopted by other journals and catalogues. A supplementary list of those that do so will be published in the fuller account and explanation of the system that will be issued shortly.

H. A. MIERS.
J. W. GREGORY.

Discovery of a New Comet.

WHILE sweeping the northern sky at 11h. 35m. on the night of July 23, with a 10-inch reflector, power 40, I found a nebulous object near θ and ζ Ursæ Minoris, which I could not identify. It was faint, round, about 1′ in diameter, and with a very slight central condensation. I noted its position relatively to the stars near, but clouds then came over and prevented further observations for nearly an hour. On reobserving the object I found it to be a comet, a considerable displacement having occurred in its position.

On July 24 I obtained another view of it, and found its diurnal motion to be about 55′ to the south. At 11h. the comet was close to a star of about the ninth magnitude. At 11h. 40m. the comet was centrally projected upon the star, and the latter appeared to be involved in an extensive atmosphere. At about 12h. 30m. the comet reappeared on the other side of the star. I could not resist the impression that the star was decidedly fainter when the comet was passing over it.

The rough estimated positions of the comet were:—

	h.		° °
July 23,	12	... ...	228 + 78
,, 24,	12	... ...	228 + 77

On July 25 and 26 the sky was cloudy and the comet not seen. It will be invisible during moonlight, but on about August 5 or 6 it ought to be picked up before moonrise in the region between γ Ursæ Minoris and ι Draconis, or at about 226° + 66°.

It is probable that this comet is approaching its perihelion and becoming brighter, in which case it may be readily seen when the sky is clear and free from moonlight.

Bristol, July 27. W. F. DENNING.

P.S.—The comet was observed at Nice on July 25, 10h., when its R.A. was 15h. 14m. (228½°), Decl. 76° 37′ N.

The Rotation of Mercury.

IN the February number of *Himmel und Erde*, and elsewhere, I have seen "that the otherwise meritorious, but in his observations and their discussion not always cautious and strict Schroeter," took the rotation period of Mercury to be twenty-four hours, but that Schiaparelli has now found that Mercury behaves to the sun as the moon to the earth, always showing the same side. The reporter also explained, by way of compliment to Prof. G. Darwin, why the planet next to the sun should differ in this respect from its companions.

As all astronomers like fair play, I went through Schroeter's papers, and read Schiaparelli's letter, No. 2944, *Astronomische Nachrichten*, which shows the usual industry, lucidity of style, and good faith of the Professor.

Schroeter and his companion Harding found the southern hemisphere of the planet rounded (*rundlich*) like the northern, but believed that they saw every twenty-four hours a certain change of form of the southern end of the lighted crescent, not perceptible in the northern. This was the leading observation, of which Schiaparelli remarks: "Of all facts known with regard to Mercury's rotation, this reappearance about every twenty-four hours of a truncation of the southern horn is the most manifest and anciently known" ("un apparente troncatura del corno australe è il più manifesto e anticamente cognosciuto").

Schroeter and Harding had for some time tried in vain to trace on the face of the planet some spot confirming their conclusion, when one day Harding first and Schroeter afterwards perceived a dark streak appearing in the east and moving west over the face of the planet. Both observed the phenomenon, with varying distinctness and under different combinations, during many days, and held that it confirmed their original hypothesis. Schroeter found that considerable increase of the magnifying power of his instrument lessened the distinctness of the shading.

Schiaparelli commenced his investigation because he considered Schroeter's result doubtful, and had instruments far superior to those used ninety years ago.

He has observed Mercury since 1881 more than 500 times, and has made on the most favourable days about 150 drawings, "to say the truth of very unequal value, but nevertheless so far agreeing as to furnish a result." That is, drawings on which the admittedly indistinct and varying feeble shadings united into one dissolving view did not always appear to be the same. The author also tells us that he made "one of his best observations when the planet was only at 3° 2′ from the limb of the sun," and "the disk of the planet then appeared perfectly round and uniformly bright;" and finally confesses, "Of these forms and streaks I have endeavoured to give an idea on the annexed drawing without concealing from myself the futility of such an attempt."

The Professor first made use of his "eight-inch instrument," then of "the eighteen," which showed the shading less distinctly, so as to make him write, "I have the impression that if one looked with a still stronger instrument all would appear dissolved in still more minute formations."

He lastly formulates three hypotheses: (1) the period is 24 hours; (2) the period divides the 24 hours without remainders; (3) there is no rotation properly speaking. He adopts No. 3, and concludes that the different appearances are caused by the great libration consequent upon the large eccentricity of its orbit.

Should there be no farther hypotheses possible, when the results of research are so conflicting, indistinct, and variable?

R.

Birds and Flowers.

IN reference to Mr. Wallace's letter (p. 295) with regard to a note in NATURE (July 17, p. 279), I correctly quoted Mr. Scott-Elliot's remark, who says:—

"I am led to entirely disagree with Mr. Wallace's opinion that the colour of flower-seeking birds is quite unconnected with their habits. As a matter of fact a peculiar shade of red found

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